The Contribution of Preterm Birth to the Black–White Infant Mortality Gap, 1990 and 2000

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Objectives. We evaluated whether the decline of the racial disparity in preterm birth during the last decade was commensurate with a decline in the contribution of preterm birth to the infant mortality gap.

Methods. We used linked files of 1990 and 2000 data on US infant births and deaths to partition the gap between Black and White infant mortality rates into differences in the (1) distribution of gestational age and (2) gestational age–specific mortality rates.

Results. Between 1990 and 2000, the Black–White infant mortality rate ratio did not change significantly (2.3 vs 2.4). Excess deaths among preterm Black infants accounted for nearly 80% of the Black–White infant mortality gap in both 1990 and 2000. The narrowing racial disparity in the preterm birth rate was counterbalanced by greater mortality reductions in White than in Black preterm infants. Extremely preterm birth (<28 weeks) was 4 times higher in Black infants and accounted for more than half of the infant mortality gap.

Conclusions. Substantial reductions in the Black–White infant mortality gap will require improved prevention of extremely preterm birth among Black infants. (*Am J Public Health.* 2007;97:1255–1260. doi:10.2105/AJPH.2006.093708)

In the United States, nearly two thirds of low-birthweight infants and nearly all very-low-birthweight infants are born preterm.[1] Preterm birth is a leading cause of infant morbidity and mortality and is associated with numerous familial, social, and economic costs related to intensive medical care and the developmental deficits of surviving very preterm infants. The immediate economic costs of preterm birth alone have been estimated to exceed $15 billion annually; this represents half of all infant hospital charges.[2]

The burden of adverse perinatal events and sequelae, including preterm birth and infant death, is not equally distributed by race.[3,4] Black infants are consistently more than twice as likely as White infants to die within the first year of life. Previous analyses of 1983, 1988, and 1991 infant mortality data suggest that almost two thirds of the racial disparity in infant mortality can be attributed to preterm birth, using very-low-birthweight as a proxy.[5–7] However, the specific contribution of excess preterm births among Black infants to this gap has not been directly examined.

During the last decade, the racial disparity in preterm birth has declined because of an increase in the preterm birth rate among White infants and a decrease in the preterm birth rate among Black infants.[8–10] However, the more than double Black–White infant mortality rate ratio has remained unchanged; mortality rates have declined approximately 20% among both Black and White infants.[3]

We examined whether and how the contribution of preterm birth to the Black–White disparity in infant mortality may have changed between 1990 and 2000. We used methods similar to previous birthweight-specific analyses to examine how changes in both the distribution of gestational age and gestational age–specific mortality rates have contributed to the infant mortality disparity over time. We focused on gestational age and the degree of preterm birth because it is a more specific outcome than birthweight, which is a product of both gestational age at delivery and the fetal growth rate.

METHODS

We used birth cohort data from the National Center for Health Statistics' Linked Birth/Infant Death Cohort Files to evaluate the gestational age–specific components of the Black–White infant mortality gap in 1990 and 2000. Unlike unlinked period data that include all births and deaths in a given year, the cohort files link all births in a given year with all corresponding deaths of infants younger than 1 year, some of which will occur in the following calendar year. Birth certificates were linked to 97.5% and 98.7% of the death records in 1990 and 2000, respectively. Analysis was restricted to singleton births of resident, non-Hispanic Black and non-Hispanic White women. The use of cohort rather than period data facilitated the examination of incidence and risk. However, infant mortality is conventionally expressed as a rate per 1000 live births, and the term *rate* will be used within this article.

Gestational age was determined by the reported date of last normal menstrual period or a clinical estimate, if available, when the date of last normal menstrual period was either missing or inconsistent with birthweight. The clinical estimate was used for less than 4% of births in both 1990 and 2000. Infants with a reported gestational age of less than 20 weeks and those with an unknown or implausible gestational age given the birthweight were excluded from analysis. Implausible combinations of gestational age and birthweight were determined using an algorithm created by Alexander et al.,[11] which defines viability at 20 weeks gestation or more with a birthweight of at least 125 g. These exclusions constitute 2% of Black and 1% of White births in 1990, and 1% of both Black and White births in 2000.

We used a decomposition method developed by Kitagawa[12] and used by other perinatal researchers[5,6,13,14] to partition the components of the Black–White gap in infant mortality according to differences in (1) the gestational age–specific distribution of births and (2) the gestational age–specific infant mortality rates. The contribution of the gestational age distribution to the Black–White infant mortality disparity was calculated as the Black–White difference in the proportion of births at a given gestational age, multiplied by the average mortality rate at that same

gestational age. Similarly, the mortality rate component was defined as the Black–White difference in the infant mortality rate at a given gestational age, multiplied by the average proportion of births at that same gestational age. For this analysis, gestational age was categorized in weeks: less than 28, 28–31, 32–36, 37–39, 40–41, and 42 or more. We defined preterm as less than 37 weeks gestation, term as 37–41 weeks gestation, and postterm as 42 or more weeks gestation.

The sum of the gestational age–specific components reflected the total contribution of excess infant deaths in a specific gestational age category to the overall infant mortality disparity. The sum of these gestational age–specific totals then represented the total infant mortality disparity.

(1) Overall Mortality Difference =

$$\sum_i \left(\left(P_{Bi} - P_{Wi}\right) * \left(\frac{R_{Bi} + R_{Wi}}{2} \right) + \left(R_{Bi} - R_{Wi}\right) * \left(\frac{P_{Bi} + P_{Wi}}{2} \right) \right),$$

where P_{Bi} = the proportion of Black infants born in gestational age category i (per 100); P_{Wi} = the proportion of White infants born in gestational age category i (per 100); R_{Bi} = the infant mortality rate among Black infants born in gestational age category i (per 1000); and R_{Wi} = the infant mortality rate among White infants born in gestational age category i (per 1000).

Positive numbers indicated excess Black infant deaths per 100 000 live births that theoretically could have been averted if Black infants had had the same gestational age–specific proportion or gestational age–specific mortality rate as White infants. Conversely, negative numbers can be interpreted as a relative excess of White infant deaths as a result of a more favorable gestational age distribution or the mortality rate among Black infants. We determined the gestational age–specific components of the Black–White disparity in infant mortality rate (deaths among infants younger than 1 year per 1000 live births), neonatal mortality rate (deaths among infants younger than 28 days per 1000 live births), and postneonatal mortality rate (deaths among infants between 28 days and younger than 1 year per 1000 neonatal survivors). Although the large number of births in vital statistics data can render even small differences statistically significant, we assessed the significance of changes in gestational age and gestational age–specific mortality by using log-binomial regression in SAS 9.1 (SAS Institute Inc, Cary, NC).[15] Only the few nonsignificant differences are noted in the tables.

TABLE 1—Gestational Age–Specific Distribution of Births, by Race: United States, 1990 and 2000

	Black			White			Black–White Rate Ratio	
	1990, % (N = 630 769)	2000, % (N = 575 527)	% Change	1990, % (N = 2 539 182)	2000, % (N = 2 260 361)	% Change	1990, %	2000, %
Gestational Age								
< 28 weeks	1.4	1.4	0.0[a]	0.3	0.3	0.0	4.0	4.0[a]
28–31 weeks	2.1	1.7	–16.8	0.6	0.6	4.5	3.6	2.8
32–36 weeks	13.6	12.2	–10.0	6.3	7.5	17.8	2.1	1.6
37–39 weeks	42.8	48.3	12.8	40.7	49.8	22.4	1.1	1.0
40 or 41 weeks	29.6	29.0	–2.0	40.1	34.4	–14.3	0.7	0.8
≥ 42 weeks	10.5	7.3	–30.2	12.0	7.4	–38.1	0.9	1.0
Total	100.0	100.0	. . .	100.0	100.0	. . .	. . .	. . .
All preterm	17.0	15.3	–9.9	7.3	8.4	16.2	2.3	1.8
All term and postterm	83.0	84.7	2.0	92.7	91.6	–1.3	0.9	0.9

Note. All differences significant at $P < .01$ unless otherwise noted. Ellipses indicate not applicable.

[a]Not statistically significant, $P > .05$.

RESULTS

Changes in the Distribution of Gestational Age

Between 1990 and 2000, preterm birth decreased approximately 10% among Black infants but increased 16% among White infants (Table 1). The decrease in preterm birth among Black infants occurred only in the very preterm (28–31 weeks) and moderately preterm (32–36 weeks) birth categories. By contrast, the increase in preterm birth among White infants occurred across all preterm gestational age categories but increased the most for moderately preterm birth. Consequently, the Black–White preterm birth rate ratio declined from 2.3 to 1.8 between 1990 and 2000; declines were mostly confined to very preterm and moderately preterm birth categories. Among preterm births in 1990 and 2000, the Black–White rate ratio increased as gestational age decreased and was 4 times higher for extremely preterm births (<28 weeks).

Changes in Gestational Age–Specific Mortality Rates

The infant mortality rate decreased 20% among Black infants (14.1 to 11.3 per 1000) and 23% among White infants (6.1 to 4.7 per 1000) between 1990 and 2000. The reduction in the infant mortality rate occurred across the range of gestational age for both Black and White infants (Table 2). However, there were substantial racial differences in the magnitude of the decrease in mortality rates, particularly among preterm infants. The mortality rate among preterm infants decreased nearly 28% for White infants (41.3 to 29.9 per 1000) but only 8% for Black infants (54.6 to 50.4 per 1000). The relative difference in mortality rate reductions was most remarkable among extremely preterm infants (<28 weeks), who have the greatest risk of dying; the decrease in mortality rate was twice as great among White infants as among Black infants.

When the racial disparities in the gestational age–specific mortality rates for the 2 periods were compared, rather than relative changes over time within each race, Black infants had lower mortality rates than did White infants at extremely preterm and very preterm gestational ages in 1990; however, this survival advantage narrowed to near equivalence in 2000 because there

TABLE 2—Gestational Age–Specific Infant Mortality Rates, by Race: United States, 1990 and 2000

	Black			White			Black–White Rate Ratio	
	1990	2000	% Change	1990	2000	% Change	1990	2000
Gestational Age								
<28 weeks	434.8	398.8	–8.3	494.7	413.6	–16.4	0.9	1.0
28–31 weeks	68.2	53.7	–21.2	83.5	59.3	–29.0	0.8	0.9[a]
32–36 weeks	14.4	10.8	–24.6	13.8	9.7	–29.7	1.0	1.1[a]
37–39 weeks	6.0	4.4	–26.5	3.8	2.7	–28.9	1.6	1.6[a]
40 or 41 weeks	5.3	3.6	–30.7	2.8	1.9	–30.3	1.9	1.9[a]
≥42 weeks	6.1	4.7	–23.1	3.8	2.6	–31.0	1.6	1.8[a]
Total	14.1	11.3	–19.9	6.1	4.7	–22.6	2.3	2.4[a]
All preterm	54.6	50.4	–7.6	41.3	29.9	–27.5	1.3	1.7
All term and postterm	5.8	4.2	–27.4	3.4	2.4	–28.3	1.7	1.7[a]

Note. Infant mortality rates are per 1000 live births. All differences significant at $P < .01$ unless otherwise noted.
[a]Not statistically significant, $P > .05$.

were greater mortality reductions among White infants compared with Black infants. This differential mortality decline resulted in a greater Black–White infant mortality disparity among preterm infants in 2000 than in 1990. The Black–White infant mortality rate ratio among preterm infants increased from 1.3 to 1.7, whereas the rate ratio among term infants did not change. In total, the Black–White infant mortality rate ratio increased slightly from 2.3 to 2.4 ($P = .09$), whereas the absolute gap declined from 8.0 to 6.5 deaths per 1000 ($P < .001$).

Components of the Black–White Infant Mortality Gap

Excess deaths among Black preterm infants, which arose from differences in either the percentage of preterm birth or the rate of mortality among preterm infants, accounted for almost 80% of the Black–White infant mortality disparity in both 1990 and 2000 (Table 3). The higher mortality rate among Black infants born at 37 weeks or greater gestation accounted for the remaining 20% of the gap.

The excess preterm deaths were predominantly attributable to the disproportionate percentage of Black infants born preterm, particularly those born extremely preterm. Among the preterm gestational age categories, Black infants had higher mortality rates than did White infants only among moderately preterm births. Extremely preterm births alone accounted for over half of the infant mortality disparity, and that contribution increased from 54% in 1990 to 62% in 2000 as a result of the greater reduction in mortality rate among White infants. By contrast, the contribution of very preterm birth and moderately preterm birth declined as a result of the disparity reduction that occurred between 1990 and 2000 in the proportion of these gestational age categories.

The contribution of racial differences in gestational age–specific mortality rates to the Black–White infant mortality disparity increased from 17% to 22% because of greater reductions in the mortality rate among White preterm infants coupled with a favorable change in the gestational age distribution among Black infants.

Neonatal Mortality

About two thirds of infant deaths occur in the neonatal period. Neonatal mortality rates decreased 16% among Black infants and 19% among White infants between 1990 and 2000 (Table 4). The Black–White mortality rate ratio, therefore, increased slightly from 2.4 to 2.5 ($P = .17$, data not shown). Excess deaths among preterm Black infants accounted for 93% of the Black–White gap in neonatal mortality in both 1990 and 2000. Similar to overall infant mortality, the disproportionate percentage of extremely preterm Black infants alone accounted for most of the racial disparity in neonatal mortality rates. The contribution of extremely preterm births increased from 76%

TABLE 3—Gestational Age–Specific Components of the Black–White Infant Mortality Disparity: United States, 1990 and 2000

	1990				2000			
	Distribution Difference[a]	Rate Difference[a]	Total Mortality Difference[b]	% of Disparity	Distribution Difference[a]	Rate Difference[a]	Total Mortality Difference[b]	% of Disparity
Gestational Age								
<28 weeks	480.4	–50.7	429.7	53.9	417.2	–12.7	404.5	61.8
28–31 weeks	113.3	–20.4	92.9	11.7	63.1	–6.5	56.6	8.6
32–36 weeks	102.0	5.8	107.8	13.5	48.9	11.3	60.2	9.2
37–39 weeks	10.6	92.5	103.0	12.9	–5.3	84.3	79.0	12.1
40 or 41 weeks	–42.0	86.8	44.8	5.6	–14.9	54.4	39.5	6.0
≥42 weeks	–7.2	25.8	18.6	2.3	–0.2	15.2	15.0	2.3
Total	657.0	139.8	796.8	100.0	508.8	146.1	654.8	100.0
All preterm	695.7	–65.3	630.4	79.1	529.2	–7.9	521.3	79.6
All term and postterm	–38.6	205.1	166.4	20.9	–20.5	153.9	133.5	20.4

Note. The infant mortality disparity is based on excess deaths per 100 000 live births.
[a]Excess deaths per 100 000 live births among Black infants because of a greater gestational age–specific proportion or mortality rate among Black infants. Negative numbers indicate excess deaths among White infants because of a lower gestational age–specific proportion or mortality rate among Black infants.
[b]Sum of excess deaths per 100 000 live births among Black infants because of differences in the gestational age–specific proportion and mortality rate.

TABLE 4—Gestational Age–Specific Components of the Black–White Neonatal and Postneonatal Mortality Disparity: United States, 1990 and 2000

	1990				2000			
	Distribution Difference[a]	Rate Difference[a]	Total Mortality Difference[b]	% of Disparity	Distribution Difference[a]	Rate Difference[a]	Total Mortality Difference[b]	% of Disparity
Neonatal mortality disparity								
Gestational Age								
<28 weeks	435.5	−59.5	376.0	76.2	373.6	-28.5	345.1	81.5
28–31 weeks	82.7	−27.2	55.5	11.2	45.1	−11.6	33.5	7.9
32–36 weeks	51.4	−23.7	27.7	5.6	25.9	−10.7	15.2	3.6
37–39 weeks	3.5	14.9	18.4	3.7	−1.9	19.2	17.3	4.1
40 or 41 weeks	−13.9	23.3	9.4	1.9	−4.7	11.9	7.1	1.7
≥42 weeks	−2.5	9.2	6.6	1.3	−0.1	5.5	5.4	1.3
Total	556.7	−63.1	493.6	100.0	437.9	−14.2	423.7	100.0
All preterm	569.6	−110.4	459.2	93.0	444.6	−50.8	393.8	92.9
All term and postterm	−12.9	47.4	34.4	7.0	−6.7	36.6	29.9	7.1
Postneonatal mortality disparity								
Gestational Age								
<28 weeks	49.6	4.6	54.2	17.6	45.6	14.2	59.8	25.6
28–31 weeks	31.5	6.4	37.8	12.3	18.4	5.0	23.3	10.0
32–36 weeks	51.4	29.5	80.9	26.4	23.4	22.1	45.5	19.5
37–39 weeks	7.7	78.1	85.8	28.0	−3.0	65.4	62.4	26.7
40 or 41 weeks	−27.9	64.0	36.1	11.7	−10.0	42.8	32.8	14.0
≥42 weeks	−4.5	16.7	12.2	4.0	−0.1	9.8	9.7	4.2
Total	107.8	199.3	307.1	100.0	74.3	159.3	233.6	100.0
All preterm	132.5	40.4	173.0	56.3	87.4	41.3	128.7	55.1
All term and postterm	−24.7	158.8	134.1	43.7	−13.1	118.0	104.9	44.9

Note. The neonatal and postneonatal mortality disparity is based on excess deaths per 100 000 live births.
[a]Excess deaths per 100 000 live births among Black infants because of a greater gestational age–specific proportion or mortality rate among Black infants. Negative numbers indicate excess deaths among White infants because of a lower gestational age–specific proportion or mortality rate among Black infants.
[b]Sum of excess deaths per 100 000 live births among Black infants because of differences in the gestational age–specific proportion and mortality rate.

to 82% between 1990 and 2000 as a result of greater mortality reductions among White than among Black extremely preterm infants. Conversely, the contribution of very preterm and moderately preterm births declined. In both 1990 and 2000, racial differences in the gestational age distribution, rather than gestational age–specific mortality, accounted for the entire Black–White mortality disparity in the neonatal period.

Postneonatal Mortality

Postneonatal mortality rates were higher for Black infants among all gestational age categories (Table 4). Between 1990 and 2000, postneonatal mortality rates declined 26% among Black infants and 27% among White infants, and the Black–White mortality rate ratio did not change (2.2 vs 2.3; data not shown). Although preterm infants accounted for a smaller proportion of postneonatal deaths than of neonatal deaths, excess deaths among Black preterm infants still accounted for 55% of the Black–White postneonatal mortality disparity in both 1990 and 2000. Greater reductions in the rate of mortality among extremely preterm White infants resulted in a greater contribution of extremely preterm births to the overall Black–White postneonatal mortality gap in 2000 than in 1990 (26% vs 18%).

DISCUSSION

Despite reductions of the racial disparity in the rate of preterm birth between 1990 and 2000, the overall contribution of preterm birth to the Black–White infant mortality disparity did not change; preterm birth accounted for approximately 80% of the disparity in each year. This figure is significantly higher than the two thirds estimate obtained in previous analyses that used very-low-birthweight as a conservative proxy for preterm birth.[5,6] The lack of change in the contribution of preterm birth to the racial disparity in infant mortality, in spite of narrowing differences in the rate of preterm birth, is explained by 2 factors. First, reductions of the Black–White disparity in the proportion of preterm births occurred only at very (28–31 weeks) and moderately (32–36 weeks) preterm gestational ages, which although more prevalent, carry a lower mortality risk than do extremely (<28 weeks) preterm gestational ages. Second, there were greater declines in mortality among White infants than among Black infants, particularly at extremely preterm gestational ages. Thus, reductions of the racial disparity in the proportion of very and moderately preterm births were counterbalanced by greater improvements in survival among extremely preterm White infants.

The increase in the rate of preterm birth among White infants has been attributed to increased obstetric intervention and use of assisted reproductive technologies (in vitro fertilization, intrafallopian transfer of gametes or zygotes).[16] Despite concern about the reproductive risks of delayed childbearing, changes in maternal age have not been shown to explain the rise in preterm birth among Whites.[8,16] The causes of the decrease in preterm birth among Blacks are largely unknown;[8,16] however, some researchers have suggested the possibility of an artifactual decline as a result of improvements in estimating gestational age.[17,18]

The other, albeit smaller, component of the racial disparity in infant mortality arises from differences in the gestational age–specific mortality rate. Excess mortality among Black term infants accounts for one fifth of the Black–White infant mortality gap. At extremely and very preterm gestational ages, Black infants actually have lower mortality rates than do White infants. The determinants of the Black infant survival advantage at early gestational ages are not known,[19,20]

but the advantage has diminished to near equivalence over the past decade as a result of greater reductions in mortality among White than among Black infants. Greater benefit from surfactant therapy introduced in the 1990s and greater access to quality care have been cited to explain the larger survival gains of White infants.[21–24] The relative equivalence of mortality rates at lower gestational ages, however, is more than offset by a large mortality disadvantage for Black infants at older gestational ages.

There are several differences and similarities noted when examining the components that contribute to the Black–White mortality gap in the neonatal and postneonatal periods. An obvious difference is the greater contribution of preterm births to the neonatal mortality disparity than to the postneonatal mortality disparity. The importance of the 2 components—differences in the gestational age distribution versus gestational age–specific mortality rates—also varies between the 2 mortality periods. The Black–White gap in neonatal mortality is entirely explained by the greater proportion of preterm birth among Black infants, whereas the postneonatal mortality gap is largely attributable to greater mortality rates among Black infants at all gestational ages, but particularly among term infants.

Changes between 1990 and 2000 in the contribution of preterm birth to the racial disparity in neonatal and postneonatal mortality were similar. Although the total contribution of preterm births to the Black–White disparities in both neonatal and postneonatal mortality remained the same in 1990 and 2000, the component from extremely preterm births increased and that of very and moderately preterm births decreased. For both neonatal and postneonatal mortality, the rising contribution from extremely preterm births resulted from greater mortality reductions among White extremely preterm infants than among Black extremely preterm infants, and the declining contribution from both very and moderately preterm birth categories arose from a narrowing racial disparity in their proportion.

Overall declines in infant mortality, thus far, have largely resulted from reductions in gestational age–specific mortality by technological innovation (i.e., antenatal steroids, surfactant therapy, early screening for congenital anomalies) and educational campaigns (i.e., Back to Sleep recommendation for SIDS),[25] many of which carry distinct social gradients in access. Other studies have shown significantly greater declines in mortality from respiratory distress syndrome[22,23] and congenital anomalies[26] among White rather than among Black infants, which is consistent with our finding of greater mortality declines among White preterm infants. It is important to recognize that continued development of access-mediated strategies to reduce gestational age–specific mortality that do not address the disproportionate need for preterm prevention among Blacks may continue to increase the racial disparity in coming years.

Limitations

One noteworthy limitation of our study concerns the measurement error inherent to gestational age estimation. Implausible combinations of gestational age and birthweight were excluded to minimize this error. The use of gestational age categories rather than exact gestational age also limits the effect of misclassification to the extent that errors are within several weeks (i.e., an infant born at 29 weeks but misdated at 28 weeks would remain in the appropriate gestational age category of 28–32 weeks). Conflicting evidence suggests that improvements in gestational age estimation may have occurred differentially by race over the last decade, potentially rendering the decline in very and moderately preterm births among Black infants artifactual.[10,17,18,27] However, even if, as 1 study portrayed,[17] a higher proportion of term Black infants were incorrectly assigned a preterm gestational age in 1990 than in 2000, the results of this analysis are not likely to be materially affected. First, the removal of records that had implausible birthweight–gestational age combinations eliminated gross errors in gestational age estimation. Second, the contribution of a given preterm gestational age category to the overall infant mortality disparity would not change markedly by the addition or subtraction of term infants misclassified as preterm, who would presumably have a lower risk of mortality than truly preterm infants. The salient and increasing contribution of extremely preterm births, produced by greater improvements in survival of White than of Black extremely preterm infants, would also remain unaffected by potential gestational age misclassification in the very or moderately preterm categories. In addition, it is also possible that the exclusion of infants with unknown or implausible gestation age or who were under 20 weeks gestation may have biased the Black–White disparity because more Black than White infant deaths were excluded; however, a sensitivity analysis that proportionately redistributed excluded infant births and deaths according to the known gestational age distribution did not alter the results.

Conclusions

Because the 4-fold disparity in the proportion of infants born at less than 28 weeks gestation accounts for three fifths of excess Black infant deaths, substantial reductions in the Black–White infant mortality gap will require improved prevention of extremely preterm birth among Black infants. The determinants of the racial disparity in preterm birth, and extremely preterm birth specifically, are not well understood. Multiple factors, including social, environmental, and intergenerational, likely coalesce over the life course to produce perinatal disparities through complex vascular and immunoregulatory processes.[28–36] More studies should examine the determinants of the disparity in extremely preterm birth, because the predictors and strength of the predictors of preterm birth have been shown to vary by the degree of prematurity.[37–39] Given the sheer magnitude of the disparity and its strong relation to both morbidity and mortality, there are few racial disparities that warrant greater research attention than extremely preterm birth. In addition, the differences in mortality among term infants should not be overlooked. Solutions to mortality disparities among term infants may seem more obvious than solutions to disparities in the rate of preterm birth, but they have not yet been achieved. Although these topics have been studied and restudied over time, they should remain at the forefront of the perinatal research agenda if all US children are to have an equal opportunity for optimal health. ■

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Contributors

A.H. Schempf developed the study, conducted data analyses, and drafted the article. All of the authors contributed to the interpretation of results and to article revisions.

Human Participant Protection

No protocol approval was needed for this study.

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